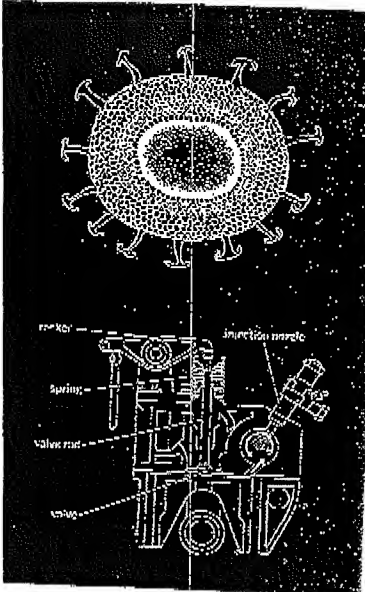


**McGraw-Hill**

# Dictionary of Scientific and Technical Terms

**DANIEL N. LAPEDES** Editor in Chief

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#### McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

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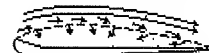
# succinate sugarcane

## SUCKER



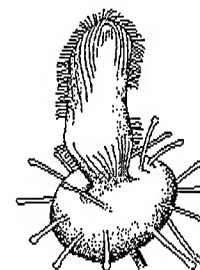
A sucker, characterized by fleshy lips.

## SUCTION BOUNDARY LAYER CONTROL



Cross-section of airfoil with suction boundary layer control.

## SUCTORIA



Endogenous budding in the suctorian *Podophrya*, a species which measures 10-28 micrometers.

## SUGARBEET



Root with leaves of a typical sugarbeet. (USDA)

**succinate** [ORG CHEM] A salt or ester of succinic acid; for example, sodium succinate,  $\text{Na}_2\text{C}_4\text{H}_4\text{O}_4 \cdot 6\text{H}_2\text{O}$ , the reaction product of succinic acid and sodium hydroxide.

**succinic acid** [ORG CHEM]  $\text{CO}_2\text{H}(\text{CH}_2)_2\text{CO}_2\text{H}$  Water-soluble, colorless crystals with an acid taste; melts at  $185^\circ\text{C}$ ; used as a chemical intermediate, in medicine, and to make perfume esters. Also known as butanedioic acid.

**succinic acid dehydrogenase** [BIOCHEM] An enzyme that catalyzes the dehydrogenation of succinic acid to fumaric acid in the presence of a hydrogen acceptor. Also known as succinic dehydrogenase.

**succinic anhydride** [ORG CHEM]  $\text{C}_4\text{H}_4\text{O}_3$  Colorless or pale yellow crystals soluble in alcohol and chloroform; converts to succinic acid in water; melts at  $120^\circ\text{C}$ ; used as a chemical and pharmaceutical intermediate and a resin hardener. Also known as butanedioic anhydride; 2,5-diketotetrahydrofuran; 2,5-dioxolane.

**succinic dehydrogenase** See succinic acid dehydrogenase.

**succinimide** [ORG CHEM]  $\text{C}_4\text{H}_5\text{O}_2\text{N} \cdot \text{H}_2\text{O}$  Colorless or tan water-soluble crystals with a sweet taste; melts at  $126^\circ\text{C}$ ; used to make plant growth stimulants and as a chemical intermediate. Also known as 2,5-diketopyrrolidine.

**succinite** [MINERAL] An amber-colored variety of grossularite.

**succinonitrile** See ethylene cyanide.

**succinoxidase** [BIOCHEM] A complex enzyme system containing succinic dehydrogenase and cytochromes that catalyzes the conversion of succinate ion and molecular oxygen to succinate ion.

**succinylcholine chloride** [ORG CHEM]  $[\text{C}(\text{CH}_3)_2\text{N}(\text{CH}_2)_2\text{CH}_2\text{CH}_2]_2\text{Cl} \cdot 2\text{H}_2\text{O}$  Water-soluble white crystals with a bitter taste; melts at  $162^\circ\text{C}$ ; used in medicine. Also known as succinylsuccinate dichloride dihydrate.

**succinyl oxide** See succinic anhydride.

**sulfamylthiazole** [PHARM]  $\text{C}_{12}\text{H}_{13}\text{N}_3\text{O}_5\text{S}_2$  A poorly absorbed sulfonamide used as an intestinal antibacterial agent in preoperative preparation of patients for abdominal surgery and also postoperatively to maintain a low bacterial count.

**succulent** [BOT] Describing a plant having juicy, fleshy tissue.

**succus entericus** [PHYSIO] The intestinal juice secreted by the glands of the intestinal mucous membrane; it is thin, colorless, alkaline, and has a specific gravity of 1.011.

**sucker** [BOT] A shoot that develops rapidly from the lower part of a plant, and usually at the expense of the plant.

**sucker** [ZOO] A disk-shaped organ in various animals for adhering to a solid object, usually of another species.

**sucker** [PETRO ENG] A connecting rod between a down-hole pump and the lifting or pumping device on the surface.

**sucker pump** [PETRO ENG] A cylinder-piston-type pump used to displace oil into the oil-well tubing string, and to the surface.

**sucker louse** [INV ZOO] The common name for insects of the order Anoplura, so named for the slender, tubular mouthparts.

**sugar** See saccharose.

**sugar** [ORG CHEM]  $\text{C}_{12}\text{H}_{22}\text{O}_{11}$  Combustible, white crystalline substance soluble in water, decomposes at 160 to  $186^\circ\text{C}$ ; derived from sugarcane or sugarbeet; used as a sweetener in drinks, foods and to make syrups, preserves, and jams. Also known as saccharose; table sugar.

**succoacetate** [ORG CHEM]  $\text{C}_{22}\text{H}_{38}\text{O}_{19}$  A bitter crystalline compound that forms needles from alcohol solution, melts at  $89^\circ\text{C}$ , and breaks down at  $286^\circ\text{C}$  or above; used as an additive to impregnate and insulate paper, and in lacquers and plastics.

**sucker** See saccharoidal.

**succinometer** [ENG] An anemometer consisting of an inclined tube which is half-filled with water that measures the change in water level caused by the wind's force.

**suction boundary layer control** [AERO ENG] A technique that in addition to purely geometric means to control boundary layer flow; it consists of sucking away the retarded flow in the lower regions of the boundary through slots or openings in the surface.

**suction cup** [ENG] A cup, often of flexible material such as rubber, in which a partial vacuum is created when it is inverted on a surface; the vacuum tends to hold the cup in place.

**suction-cutter dredger** [MECH ENG] A dredger in which rotary blades dislodge the material to be excavated, which is then removed by suction as in a sand-pump dredger.

**suction dredge** [NAV ARCH] A vessel equipped with a centrifugal pump to excavate under water.

**suction head** See suction lift.

**suction lift** [MECH ENG] The head, in feet, that a pump must provide on the inlet side to raise the liquid from the supply well to the level of the pump. Also known as suction head.

**suction line** [ENG] A pipe or tubing feeding into the inlet of a fluid impelling device (for example, pump, compressor, or blower), consequently under suction.

**suction pump** [MECH ENG] A pump that raises water by the force of atmospheric pressure pushing it into a partial vacuum under the valved piston, which retreats on the upstroke.

**suction stroke** [MECH ENG] The piston stroke that draws a fresh charge into the cylinder of a pump, compressor, or internal combustion engine.

**suction wave** See rarefaction wave.

**Suctorina** [INV ZOO] A small subclass of the protozoan class Ciliata, distinguished by having tentacles which serve as mouths.

**Suctorina** [INV ZOO] The single order of the protozoan subclass Suctorina.

**sudaman** [MED] A skin disease in which sweat accumulates under the superficial horny layers of the epidermis to form small, clear, transparent vesicles.

**sudatoria** See hyperhidrosis.

**sudburite** [GEOL] A basic basalt composed of hypersthene, augite, and magnetite, among other minerals.

**sudden commencement** [GEOPHYS] Magnetic storms which start suddenly (within a few seconds) and simultaneously all over the earth.

**sudden ionospheric disturbance** [GEOPHYS] A complex combination of sudden changes in the condition of the ionosphere following the appearance of solar flares, and the effects of these changes. Abbreviated SID.

**sudomotor** [PHYSIO] Pertaining to the efferent nerves that control the activity of sweat glands.

**suede** [MATER] Leather with a velvet finish on the flesh side of the skin; calfskin is the commonest suede leather. Also known as napped leather.

**suestada** [METEOROL] Strong southeast winds occurring in winter along the coast of Argentina, Uruguay, and southern Brazil; they cause heavy seas and are accompanied by fog and rain; the counterpart of the northeast storm in North America.

**suevite** [GEOL] A grayish or yellowish fragmental rock associated with meteorite impact craters; resembles tuff breccia or pumiceous tuff but is of nonvolcanic origin.

**suffrutescent** [BOT] Of or pertaining to a stem intermediate between herbaceous and shrubby, becoming partly woody and perennial at the base.

**sulfruticose** [BOT] Low stems which are woody, grading into herbaceous at the top.

**sugar** [BIOCHEM] A generic term for a class of carbohydrates usually crystalline, sweet, and water soluble; examples are glucose and fructose.

**sugar alcohol** [ORG CHEM] Any of the acyclic linear polyhydric alcohols; may be considered sugars in which the aldehydic group of the first carbon atom is reduced to a primary alcohol; classified according to the number of hydroxyl groups in the molecule; sorbitol (D-glucitol, sorbite) is one of the most widespread of all the naturally occurring sugar alcohols.

**sugarbeet** [BOT] *Beta vulgaris*. A beet characterized by a white root and cultivated for the high sugar content of the roots.

**sugar berg** [OCEANOGR] An iceberg of porous glacier ice.

**sugarcane** [BOT] *Saccharum officinarum*. A stout, perennial grass plant characterized by two-ranked leaves, and a many-jointed stalk with a terminal inflorescence in the form of a

## fluidic device fluorescent screen

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**fluidic device** [ENG] A device that operates by the interaction of streams of fluid.

**fluidics** [ENG] A control technology that employs fluid dynamic phenomena to perform sensing, control, information processing, and actuation functions without the use of moving mechanical parts.

**fluid inclusion** [PETR] A tiny fluid-filled cavity in an igneous rock that forms by the entrapment of the liquid from which the rock crystallized.

**fluidity** [FL MECH] The reciprocal of viscosity; expresses the ability of a substance to flow.

**fluidization** [CHEM ENG] A roasting process in which finely divided solids are suspended in a rising current of air (or other fluid), producing a fluidized bed; used in the calcination of various minerals, in Fischer-Tropsch synthesis, and in the coal industry.

**fluidized adsorption** [CHEM ENG] Method of vapor- or gas-fractionation (separation via adsorption-desorption cycles) in a fluidized bed of adsorbent material.

**fluidized bed** [ENG] A cushion of air or hot gas blown through the porous bottom slab of a container which can be used to float a powdered material as a means of drying, heating, quenching, or calcining the immersed components.

**fluidized-bed coating** [ENG] Method for plastic-coating of objects; the heated object is immersed into the fluidized bed of a thermoplastic resin that then fuses into a continuous uniform coating over the immersed object.

**fluidized-bed reactor** See fluidized reactor.

**fluidized reactor** [NUCL] A nuclear reactor in which the fuel has been given the properties of a quasi-fluid, such as by suspension of fine fuel particles in a carrying gas or liquid. Also known as fluidized-bed reactor.

**fluid-loss agent** [MATER] Material used to thicken or gel crude oil, light oil, and water or acid fracturing fluids to seal off pores and flow channels in the reservoir matrix.

**fluid-loss test** [PETR ENG] Measure of fracturing fluid loss versus time (spurt loss) before the fluid-loss agent forms a nonpermeable layer in the reservoir pore matrix.

**fluid mechanics** [MECH] The science concerned with fluids, either at rest or in motion, and dealing with pressures, velocities, and accelerations in the fluid, including fluid deformation and compression or expansion.

**fluid meter** See flow meter.

**fluid ounce** [MECH] Abbreviated fl oz. 1. A unit of volume used in the United States for measurement of liquid substances, equal to 1/16 liquid pint or 231/128 cubic inches, or  $2.95735295625 \times 10^{-5}$  cubic meter. 2. A unit of volume used in the United Kingdom for measurement of liquid substances, and occasionally of solid substances, equal to 1/20 pint or approximately  $2.84130 \times 10^{-5}$  cubic meter.

**fluid resistance** [FL MECH] The force exerted by a gas or liquid opposing the motion of a body through it. Also known as resistance.

**fluid saturation** [GEOL] Measure of the gross void space in a reservoir rock that is occupied by a fluid.

**fluid statics** [FL MECH] The determination of pressure intensities and forces exerted by fluids at rest.

**fluid stress** [MECH] Stress associated with plastic deformation in a solid material.

**fluid ton** [MECH] A unit of volume equal to 32 cubic feet or approximately  $9.0614 \times 10^{-3}$  cubic meter; used for many hydrometallurgical, hydraulic, and other industrial purposes.

**fluid transmission** [MECH ENG] Automotive transmission with fluid drive.

**fluid viscosity ratio** [PETR ENG] Ratio of viscosity of a displacing gas to that of oil in a gas-drive reservoir; used in unit displacement efficiency calculations.

**fluke** [INV ZOO] The common name for more than 40,000 species of parasitic flatworms that form the class Trematoda. [NAV ARCH] The broad end of each arm of an anchor.

**flume** [ENG] 1. A flatfish, especially summer flounder. 2. An open channel constructed of steel, reinforced concrete, or wood and used to convey water to be utilized for power, to transport logs, and so on.

**flume** [ENG] 1. A flume, as the waters of a stream, in order to lay bare the auriferous sand and gravel forming the bed. [GEOL] A ravine with a stream flowing through it.

**flumed** [MIN ENG] In hydraulic mining, pertaining to the transportation of solids by suspension or flotation in flowing water.

**fluoborate** [INORG CHEM] 1. Any of a group of compounds related to the borates in which one or more oxygens have been replaced by fluorine atoms. 2. The  $\text{BF}_4^-$  ion, which is derived from fluoboric acid,  $\text{HBF}_4$ .

**fluoboric acid** [INORG CHEM]  $\text{HBF}_4$ . Colorless, clear, water-miscible acid; used for electrolytic brightening of aluminum and for forming stabilized diazo salts.

**fluoborite** [MINERAL]  $\text{Mg}_3(\text{BO}_3)(\text{F},\text{OH})_3$ . A colorless mineral composed of magnesium fluoborate; occurs in hexagonal prisms.

**fluocerite** [MINERAL]  $(\text{Ce},\text{La},\text{Nd})\text{F}_3$ . A reddish-yellow mineral composed of fluoride of cerium and related elements.

**fluolite** See pitchstone.

**fluor** See fluorite.

**fluoranthene** [ORG CHEM]  $\text{C}_{10}\text{H}_{10}$ . A tetracyclic hydrocarbon found in coal tar fractions and petroleum, forming needlelike crystals, boiling point  $250^\circ\text{C}$ , and soluble in organic solvents such as ether and benzene.

**fluorapatite** [MINERAL] 1.  $\text{Ca}_5(\text{PO}_4)_3\text{F}$ . A mineral of the solid-solution series of the apatite group; common accessory mineral in igneous rocks. 2. An apatite mineral in which the fluoride member dominates.

**fluorene** [ORG CHEM]  $\text{C}_{14}\text{H}_{10}$ . A hydrocarbon chemical present in the middle oil fraction of coal tar; insoluble in water, soluble in ether and acetone, melting point  $116-117^\circ\text{C}$ ; used as the basis for a group of dyes. Also known as 2,3-benzindene; diphenylene methane.

**fluorescein** [ORG CHEM]  $\text{C}_{20}\text{H}_{12}\text{O}_5$ . A yellowish to red powder, melts and decomposes at  $290^\circ\text{C}$ , insoluble in water, benzene, and chloroform, soluble in glacial acetic acid, boiling alcohol, ether, dilute acids, and dilute alkali; used in medicine, in oceanography as a marker in sea water, and in textiles to dye silk and wool.

**fluorescence** [ATOM PHYS] 1. Emission of electromagnetic radiation that is caused by the flow of some form of energy into the emitting body and which ceases abruptly when the excitation ceases. 2. Emission of electromagnetic radiation that is caused by the flow of some form of energy into the emitting body and whose decay, when the excitation ceases, is temperature-independent. [NUC PHYS] Gamma radiation scattered by nuclei which are excited to and radiate from an excited state.

**fluorescence analysis** See fluorometric analysis.

**fluorescence method** [GRAPHICS] A method of ultraviolet photography in which the subject is illuminated by ultraviolet light, and a filter is used on the camera to absorb the reflected ultraviolet light and permit only the visible fluorescence to reach the film.

**fluorescence microscope** [OPTICS] A variation of the compound laboratory light microscope which is arranged to admit ultraviolet, violet, and sometimes blue radiations to a specimen, which then fluoresces.

**fluorescence spectra** [SPECT] Emission spectra of fluorescence in which an atom or molecule is excited by absorbing light and then emits light of characteristic frequencies.

**fluorescent antibody** [IMMUNOL] An antibody labeled by a fluorescent dye; such as fluorescein.

**fluorescent antibody test** [IMMUNOL] A clinical laboratory test based on the antigen used in the diagnosis of syphilis and lupus erythematosus and for identification of certain bacteria and fungi, including the tubercle bacillus.

**fluorescent dye** [CHEM] A highly reflective dye that serves to intensify color and add to the brilliance of a fabric.

**fluorescent lamp** [ELECTR] A tubular discharge lamp in which ionization of mercury vapor produces radiation that activates the fluorescent coating on the inner surface of the glass.

**fluorescent pigment** [CHEM] A pigment capable of absorbing both visible and nonvisible electromagnetic radiations and releasing them quickly as energy of desired wavelength. Examples are zinc sulfide or cadmium sulfide.

**fluorescent screen** [ENG] A sheet of material coated with a fluorescent substance so as to emit visible light when struck by ionizing radiation such as x-rays or electron beams.

FLUKE



fluke *Oplathorochis sinensis*, a flatfish characterized by developed suckers.

## linked ammunition

## lipid pneumonia

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**linked ammunition** [ORD] Cartridges fastened side by side with metal links, forming a belt for ready feed to a machine gun.

**link ejection chute** [ORD] A chute or passage attached to a machine gun, through which links are thrown or conveyed to a desired point after being separated from the cartridges; it may be either fixed or flexible.

**link encryption** [COMMUN] The application of on-line crypto-operation to the individual links of relay systems so that all messages passing over the link are encrypted in their entirety.

**linker-deflinker** [ORD] A machine designed to assemble or disassemble a metallic disintegrating linked belt for ammunition.

**Linke scale** [METEOROL] A type of cyanometer; used to measure the blueness of the sky; it is simply a set of eight cards of different standardized shades of blue, numbered (evenly) 2 to 16; the odd numbers are used by the observer if the sky color lies between any of the given shades. Also known as blue-sky scale.

**link group** [COMMUN] A collection of links that employ the same multiplex terminal equipment.

**link-loading machine** [ORD] Machine that quickly loads ammunition into interlocking metal links, which in turn form an ammunition belt for certain types of automatic weapons.

**link stretch** [ORD] The change in the center to center distance of the individual rounds of belted ammunition as the load is applied.

**lin-log amplifier** [ELECTR] Automatic gain control amplifier that operates in a linear manner for low-amplitude input signals, but responds in a logarithmic manner to high-amplitude input signals.

**linnaeite** [MINERAL]  $(\text{Co,Ni})_2\text{S}_4$  A steel-gray mineral with a coppery-red tarnish, occurring in isometric crystals; an ore of cobalt. Also known as cobalt pyrites; linneite.

**linneite** See linnaeite.

**Linnik interference microscope** [OPTICS] A type of interference microscope used for studying the surface structure of reflecting specimens; light from a source is divided by a semireflecting mirror into two beams, one of which is focused through an objective onto the specimen surface, the other onto a comparison surface; after reflection from the respective surfaces, the beams are reunited by the mirror.

**Linofilm typesetter** [GRAPHICS] A photographic typesetting machine consisting of a keyboard, photographic unit, corrector, and composer; the keyboard produces a perforated paper tape containing information for operating the photographic unit, which produces right-reading positive type on film or on photographic paper; the corrector affixes correct lines in position automatically; and the composer produces a made-up page.

**linoleic acid** [BIOCHEM]  $\text{C}_{17}\text{H}_{31}\text{COOH}$  A yellow unsaturated fatty acid, boiling at  $229^\circ\text{C}$  (14 mm Hg), occurring as a glyceride in drying oils; obtained from linseed, safflower, and tall oils; a principal fatty acid in plants, and considered essential in animal nutrition; used in medicine, feeds, paints, and margarine. Also known as linolic acid; 9,12-octadecadienoic acid.

**linolenate** [BIOCHEM] A salt or ester of linolenic acid.

**linolenic acid** [BIOCHEM]  $\text{C}_{17}\text{H}_{33}\text{COOH}$  One of the principal unsaturated fatty acids in plants and an essential fatty acid in animal nutrition; a colorless liquid that boils at  $230^\circ\text{C}$  (17 mm Hg), soluble in many organic solvents; used in medicine and drying oils. Also known as 9,12,15-octadecatrienoic acid.

**linoleum** [MATER] A floor covering made by applying a mixture of gelled linseed oil, pigments, fillers, and other materials to a burlap backing, and curing to produce a hard, resilient sheet.

**linolic acid** See linoleic acid.

**Linotron** [GRAPHICS] A high-speed cathode-ray photocomposition machine, designed to take computer magnetic tapes directly and expose negatives at speeds from 600 to over 1000 characters per second, depending on type size.

**Linotype** [GRAPHICS] A typesetting machine in which the type molds of letters are arranged in lines; solid slugs, or lines of type, are cast; to make a correction, the entire line must be reset and recast.

**linseed cake** [MATER] The residue formed during pressing of commercial linseed oil; used for cattle feed and fertilizer.

**linseed oil** [MATER] A product made from the seeds of the flax plant by crushing and pressing either with or without heat; formulated in various grades and with various drying agents and used as a vehicle in oil paints and as a component of oil varnishes.

**lintel** [BUILD] A horizontal member over an opening, such as a door or window, usually carrying the wall load.

**linter** [MECH ENG] A machine for removing fuzz linters from ginned cottonseed.

**linters** [BOT] Short residual fibers that adhere to ginned cottonseed; used for making fabrics that do not require long fibers.

**linuron** [ORG CHEM] A powder, 3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea, soluble in organic solvents; used as selective pre- or postemergence herbicide.

**LIOPS** [ADP] Set of routines handling buffering, blocking, label checking, and overlap of input/output with processing. Derived from logical input/output control system.

**lion** [VERT ZOO] *Felis leo*. A large carnivorous mammal of the family Felidae distinguished by a tawny coat and black-tufted tail, with a heavy blackish or dark-brown mane in the male.

**Lion** See Leo.

**Liopteridae** [INV ZOO] A small family of hymenopteran insects in the superfamily Cynipoidea.

**Louville equation** [STAT MECH] An equation which states that the density of points representing an ensemble of system in phase space which are in the neighborhood of some given system does not change with time.

**Louville-Neumann series** [MATH] An infinite series of functions constructed from the given functions in the Fredholm equation which under certain conditions provides a solution. Also known as Neumann series.

**Louville's theorem** [MATH] Every function of a complex variable which is bounded and analytic in the entire complex plane must be constant.

**lip** [ANAT] A fleshy fold above and below the entrance to the mouth of mammals. [MED] The margin of an open wound.

**lipallan** [GEOL] A hypothetical geologic period that supposedly antedated the Cambrian.

**Liparidae** [INV ZOO] The equivalent name for Lymantriidae.

**lipase** [BIOCHEM] An enzyme that catalyzes the hydrolysis of fats or the breakdown of lipoproteins.

**lipemia** [MED] The presence of a fine emulsion of fat substance in the blood. Also known as lipidemia; lipoidemia.

**Liphistidae** [INV ZOO] A family of spiders in the suborder Liphistiomorphae in which the abdomen shows evidence of true segmentation by the presence of tergal and sternal plates.

**Liphistiomorphae** [INV ZOO] A suborder of arachnids in the order Araneida containing families with a primitively segmented abdomen.

**lipid** [BIOCHEM] One of a class of compounds which contain long-chain aliphatic hydrocarbons and their derivatives, such as fatty acids, alcohols, amines, amino alcohols, and aldehydes; includes waxes, fats, and derived compounds. Also known as lipin; lipoid.

**lipidemia** See lipemia.

**lipid histiocytosis** [MED] 1. Any collection of histiocytes containing lipids. 2. See Niemann-Pick disease.

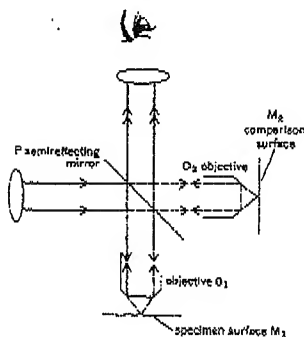
**lipid metabolism** [BIOCHEM] The physiologic and metabolic processes involved in the assimilation of dietary lipids and the synthesis and degradation of lipids.

**lipid nephrosis** [MED] A chronic kidney disease of children associated with thickening of the basement membranes of glomeruli and characterized by edema, presence of protein in the urine, and abnormally high blood levels of albumin and cholesterol.

**lipidosis** [MED] The generalized deposition of fat, or fat substances in reticuloendothelial cells. Also known as lipodosis.

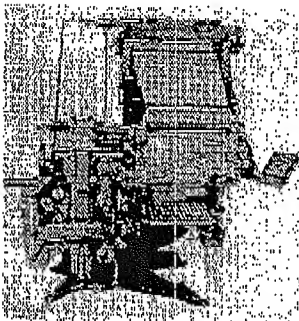
**lipid pneumonia** [MED] 1. Pneumonia resulting from aspiration of oily substances, such as nose drops. 2. Deposition of lipids in tissues of chronically inflamed lungs. Also known as lipoid pneumonia.

### LINNIK INTERFERENCE MICROSCOPE



The Linnik interference microscope for reflecting specimens.

### LINOTYPE



Linotype, a kind of keyboard typesetter that produces type in the form of slugs, or solid lines.



## alarm valve alcoholic fermentation

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**alarm valve** [ENG] A device that sounds an alarm when water flows in an automatic sprinkler system.

**Alaska Current** [OCEANOGR] A current that flows northward and westward along the coasts of Canada and Alaska to the Aleutian Islands.

**Alaska Integrated Communications Exchange** [ELECTR] A network of radio stations, generally using scatter-propagation equipment, that links early-warning radar stations. Also known as Alice; White Alice.

**alaakite** See aplite.

**Alaudidae** [VERT ZOO] The larks, a family of Oscine birds in the order Passeriformes.

**Albada finder** [OPTICS] A viewfinder used with a camera held at eye level; the field of view is enclosed by a white frame that is made to appear very distant by reflection from the rear surface of the objective lens.

**albite** [MINERAL] Greenish to brownish bitumen which becomes white when exposed to air; contains up to 15% oxygen; fusible; insoluble in organic solvents; varies from soft to hard, porous to compact; atomic ratio H/C 1.75-2.25.

**Albamycin** [MICROBIO] A trade name for the antibiotic novobiocin.

**albanite** [PETR] A melanocratic leucite found near Rome, Italy.

**albatross** [VERT ZOO] Any of the large, long-winged oceanic birds composing the family Diomedidae of the order Procellariiformes.

**albedo** [NUCLEO] The reflection factor a surface, such as paraffin, has for neutrons. [OPTICS] That fraction of the total light incident on a reflecting surface, especially a celestial body, which is reflected back in all directions.

**albedometer** [ENG] An instrument used for the measurement of the reflecting power, that is, the albedo, of a surface.

**albedo neutrons** See albedo particles.

**albedo particles** [OPHYS] Neutrons or other particles, such as electrons or protons, which leave the earth's atmosphere, having been produced by nuclear interactions of energetic particles within the atmosphere. Also known as albedo neutrons.

**Alberger process** [CHEM ENG] A method of manufacturing salt by heating brine at high pressure and passing it to a graveler which removes calcium sulfate; the salt crystallizes as the pressure is reduced and thus is separated from the brine.

**Albers projection** [MAP] An equal-area projection of the conical type, on which the meridians are straight lines that meet in a common point beyond the limits of the map, and the parallels are concentric circles whose center is at the point of intersection of the meridians.

**Alberta low** [METEOROL] A low centered on the eastern slope of the Canadian Rockies in the province of Alberta, Canada.

**alberite** [MINERAL] Jet-black, brittle natural hydrocarbon with conchoidal fracture, hardness of 1-2, and specific gravity of approximately 1.1. Also known as asphaltite coal.

**albertype** See photogelatin printing plate.

**Albian** [GEOL] Uppermost Lower Cretaceous geologic time.

**albinism** [MED] A hereditary, metabolic disorder transmitted as an autosomal recessive and characterized by the inability to form melanin in the skin, hair, and eyes due to tyrosinase deficiency.

**Albionian** [GEOL] Lower Silurian geologic time.

**albite** [MINERAL]  $\text{NaAlSi}_3\text{O}_8$  A colorless or milky-white variety of plagioclase of the feldspar group found in granite and various igneous and metamorphic rocks. Also known as sodalase; sodium feldspar; white feldspar; white schorl.

**albite-epidote-amphibolite facies** [PETR] Rocks of metamorphic type formed under intermediate temperature and pressure conditions by regional metamorphism or in the outer contact metamorphic zone.

**albite law** [CRYSTAL] A rule specifying the orientation of alternating lamellae in multiple twin feldspar crystals; the twinning plane is brachypinacoid and is common in albite.

**albitite** [PETR] A porphyritic dike rock that is coarse-grained and composed almost wholly of albite; common accessory minerals are muscovite, garnet, apatite, quartz, and opaque oxides.

**albitization** [PETR] The formation of albite in a rock as a secondary mineral.

**albitophyre** [PETR] A porphyritic rock that contains albite phenocrysts in a groundmass composed mostly of albite.

**albolite** [MATER] A plastic cement composed principally of magnesia and silica.

**albomycin** [MICROBIO] An antibiotic produced by *Actinomyces subspicatus*; effective against penicillin-resistant pneumococci and staphylococci.

**alboranite** [PETR] Olivine-free hypersthene basalt.

**albuginea** [HISTOL] A layer of white, fibrous connective tissue investing an organ or other body part.

**albumen** [CYTOL] The white of an egg, composed principally of albumin.

**albumin** [BIOCHEM] Any of a group of plant and animal proteins which are soluble in water, dilute salt solutions, and 50% saturated ammonium sulfate.

**albumin-globulin ratio** [BIOCHEM] The ratio of the concentrations of albumin to globulin in blood serum.

**albumin glue** [MATER] A bonding agent composed of soluble dried blood with minor additives and giving strong, durable bonds when coagulated in plywood joints at temperatures of 160-180° F (71-82°C).

**albuminoid** [BIOL] Having the characteristics of albumin.

**albuminuria** [MED] The presence of albumin in the urine; usually symptomatic of kidney disease.

**albumose** [BIOCHEM] A protein derivative formed by the action of a hydrolytic enzyme, such as pepsin.

**alburnum** See sapwood.

**Alcaligenes** [MICROBIO] A genus of motile and nonmotile, gram-negative, rod-shaped bacteria of the family Achromobacteraceae, found generally in the intestinal tract of vertebrates.

**Alcaligenes bookeri** [MICROBIO] A motile, gram-negative, rod-shaped bacterium associated with diarrhea in human infants.

**Alcaligenes faecalis** [MICROBIO] A gram-negative, rod-shaped, peritrichously flagellated bacterium, the type species of the genus, in the family Achromobacteraceae.

**alcaptonuria** See alcaptonuria.

**Alcedinidae** [VERT ZOO] The kingfishers, a worldwide family of colorful birds in the order Coraciiformes; characterized by large heads, short necks, and heavy, pointed bills.

**alchemy** [CHEM] A speculative chemical system having as its central aims the transmutation of base metals to gold and the discovery of the philosopher's stone.

**Alcidae** [VERT ZOO] A family of shorebirds, predominantly of northern coasts, in the order Charadriiformes, including auks, puffins, courtes, and guillemots.

**Alciopidae** [INV ZOO] A pelagic family of errantian annelid worms in the class Polychaeta.

**Alclad** [MET] A composite metal in sheet form, of the Aluminum Company of America, having a face usually of relatively pure aluminum and a base of higher-strength aluminum alloy. Also known as clad.

**alcogel** [CHEM] A gel formed by an alcisol.

**alcohol** [ORG CHEM] 1.  $\text{C}_2\text{H}_5\text{OH}$  A colorless, volatile liquid; boiling point of pure liquid is 78.3°C; it is soluble in water, chloroform, and methyl alcohol; used as solvent and in manufacture of many chemicals and medicines. Also known as ethanol; ethyl alcohol. 2. Any of a class of organic compounds containing the hydroxyl group, OH.

**alcoholate** [ORG CHEM] A compound formed by the reaction of an alcohol with an alkali metal. Also known as alkoxide.

**alcohol C-9** See *n*-nonyl alcohol.

**alcohol C-12** See lauryl alcohol.

**alcohol dehydrogenase** [BIOCHEM] The enzyme that catalyzes the oxidation of ethanol to acetaldehyde.

**alcohol fuel** [MATER] A motor fuel of gasoline blended with 5-25% of anhydrous ethyl alcohol; used particularly in Europe.

**alcoholic** [MED] An individual who consumes excess amounts of alcoholic beverages to the extent of being addicted, habituated, or dependent.

**alcoholic beverage** [FOOD ENG] A potable preparation containing ethyl alcohol.

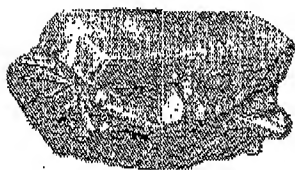
**alcoholic fermentation** [MICROBIO] The process by which

### ALBATROSS



The Laysan albatross, with the characteristic hooked bill and long, tubular nostrils of oceanic birds.

### ALBITE



Crystals of albite from Amelia Court House, Virginia. (Specimen from Department of Geology, Bryn Mawr College)